

## SEQUENCE LISTING

<110> Henderson, Robert A.  
 Wang, Tongtong  
 Watanabe, Yoshihiro  
 Johnson, Jeffrey C.  
 Retter, Marc W.  
 Marnerakis, Margarita  
 Carter, Darrick  
 Fanger, Gary R.  
 Vedvick, Thomas S.  
 Bangur, Chaitanya S.  
 McNabb, Andria

<120> COMPOSITIONS AND METHODS FOR THE THERAPY  
 AND DIAGNOSIS OF LUNG CANCER

<130> 210121.478C17

<140> US

<141> 2001-07-10

<160> 2002

<170> FastSEQ for Windows Version 4.0

<210> 1

<211> 527

<212> DNA

<213> Homo sapiens

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<212> DNA

<213> Homo sapiens

<400> 2



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<210> 3

<211> 464

<212> DNA

<213> Homo sapiens

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ccccaggcc caccoccaga gattgttatt tatcaggagc ttcgcatgga agcttttgtc 360
gtctaccgct ggcaaggaga tgcccgcmaa aaagctctga aggacttgct gaaatgggtc 420
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<210> 4

<211> 510

<212> DNA

<213> Homo sapiens

<400> 4

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gaggtgggct gggagattaa catcttacct ggggtccttc agataaacct gttggttttt 180
cctgtctcat acaggcccat cttaagtttt gatgttgaat taaaactact tctacccct 240
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ttattatata ctgcttttgt taagcagagt cctctggaat ttatgtacag tacattagtt 420
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<210> 5

<211> 452

<212> DNA

<213> Homo sapiens

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agtggttagat ttagaagaag agaaccaaaa acttttgcta gaaaatcagc ttttacgaga 180
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<212> DNA

<213> Homo sapiens

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atccacgatac	gagggcatat	tgtttcagtt	ctcaatgcat	ggccagaaga	tgtcatcaag	180
gccattgtgg	tgactgatgg	agagcgtatt	cttggccttg	gagaccttgg	ctgtaatgga	240
atgggcaccc	ctgtgggtaa	attggctcta	tatacagctt	gcggagggat	gaatcctcaa	300
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<211> 376

<212> DNA

<213> Homo sapiens

<400> 7

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atatcttttgg	ataatgttat	ttctattttt	tatttttttt	cattagaagt	taccaaatta	180
agatggtaag	acctctgaga	ccaaaatttt	gtcccatctc	tacccctca	caactgctta	240
cagaatggat	catgtcccc	ttatgttgag	gtgaccactt	aattgctttc	ctgcctcctt	300
gaaagaaaga	aagaaagaag	actgtgtttt	tgccactgat	ttagccatgt	gaaactcatc	360
tcattaccct	tttctg					376

<210> 8

<211> 406

<212> DNA

<213> Homo sapiens

<400> 8

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ctgtgttaaa	gatgctgcta	atgtcagtc	ctgggtgcac	taaaggatct	cttattttat	180
gtaaaacgtt	gggattgaca	agatagatct	gatactctgt	taagttaccc	tctgaagcta	240
cttcttgtga	aataactaatg	acagcatcat	cctgccaaagc	gaaagaggca	ggcataagca	300
aggacaaatt	aaaagggggg	aagagcctta	tcatgatgag	gagtcttggt	ttgacatctt	360
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<210> 9

<211> 330

<212> DNA

<213> Homo sapiens

<400> 9

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ctctggcctt	ccgagaaggt	accatcaatg	tccacgacgt	ggagacacag	ttcaatcagt	180
ataaaaacgga	agcagcctct	cgatataacc	tgacgatctc	agacgtcagc	gtgagtgatg	240
tgccatttcc	tttctctgcc	cagtctgggg	ctgggggtgcc	aggctggggc	atcgcgctgc	300



tggtgctggg ctgtgttctg gttgcgctgg

330

<210> 10

<211> 449

<212> DNA

<213> Homo sapiens

<400> 10

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ggtgtctcag	ggctggggtg	gggtccaaag	tgtaaggacc	ccctgccctt	agtggagagc	180
tggagcttgg	agacattacc	ccttcatcag	aaggaatttt	cggatgtttt	cttgggaagc	240
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<210> 11

<211> 472

<212> DNA

<213> Homo sapiens

<400> 11

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aacccttggg	ggataagaca	gccacacatg	gctcaggctg	ttaggtgtcc	actgtcacag	180
tccaaagaga	aaggtagcgc	ctccaagggg	gcagcttaag	ccaacatgta	agacttgggc	240
acgatgaaag	gacggggggtc	cagctacgaa	tggtttttgtt	cttgatgtca	agttgccagc	300
tactggaagg	caggagcagt	ttcttctttt	tcccactctg	tgctgggtac	ttgggagagg	360
cgaaataaat	accagactgt	ccactcctca	gcctaaggctc	cttctcaagt	cctgcacact	420
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<210> 12

<211> 371

<212> DNA

<213> Homo sapiens

<400> 12

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gtccacaggt	acctaccccc	tggactgcag	caactttatt	accttaacta	gcacaraaca	180
gaggttgatt	taaactcctt	acactcactt	ctcaratcaa	tgaatgggca	aaraaacmcc	240
tcattggtct	gggaaggcat	gctgaraccc	gttttttgcaa	gtcctgagga	atggaaraat	300
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<211> 493

<212> DNA

<213> Homo sapiens

<220>

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 234, 235, 236, 237, 238, 239  
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<400> 13

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aggtgccaaa tcccaggaca ggcattgaagt gaccatcatt cagcttcaca cactgatatt 180
tcgaatccat ttctgtcnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn nnnnnnnnnn 240
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agcaatcccc cagagcttct ttgagacgtc ctcaggtgtc ctttgacgat gcgtcctcca 420
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gaatgttggg gtg 493
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<210> 14

<211> 540

<212> DNA

<213> Homo sapiens

<400> 14

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ctgtttcgag aaacagtgtc ttgcttacia tttcagggtt agatgggttg ttgaacacct 300
tgactattgt aggtgcctca aacacgttgt cctcagttac tagcatgcac acaaattctc 360
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tgtctttgta ttctgggtaca tcgtcgtact gcacactttt cttttagtag gatctgaagg 480
caataaatac tggggagcca tcgggctttt catatttcca tttgccccaa catgagattc 540
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<210> 15

<211> 421

<212> DNA

<213> Homo sapiens

<400> 15

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atctcttggt ccttgggact ggggccagcc tcttgctctg ccacttccct ctcattagtc 180
agatagcccc aaaggctcta tcttttagct ccagagaact ttttggctct cagtatttcc 240
cttccccctt ccttcctatt cccacaaact gggggaggga agggagaaca ggggcacctg 300
atcatcaatc tcccctgccc ctctcttgaa gccccctaga tttggatgaa gagcaggcca 360
gtgagcaggg caaagcctgc taggagcaga atgaccttga ggatcctttg ctcagaactg 420
g 421
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<210> 16

<211> 236

<212> DNA

<213> Homo sapiens

<400> 16



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gctgacagca aagagctgct ctctgtgggc ctgcttcac tcatccgaga ggccgtacaa 120
gaagtgggtc attcctttgt ctgaaggagc gacaggagca tctacgggtg agaagacaga 180
aagtttggct tcgtcgatgt cttgctgtgt gaattttcca gacttagccc agtcga 236

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<210> 17
<211> 424
<212> DNA
<213> Homo sapiens

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<400> 17
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cattcagcct ttaccaatct tgtcctccaa aaaaacgaga agacatactg aaggcatgca 120
agcagatgca gatgataata ttcttgatta ctcgatgga atggaagaaa tatttggttc 180
cctcaattcc ctgaaacaag acatcgagca tatgaaattt ccaatgggta ctcagaccaa 240
tccagcccga acttgtaaag acctgcaact cagccatcct gacttcccag atggtgaata 300
ttggattgat cctaaccaag gttgctcagg agattccttc aaagtttact gtaatttcac 360
atctgggtggg gagacttgca tttatccaga caaaaaatct gagggagtaa gaatttcac 420
atgg 424

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<210> 18
<211> 154
<212> DNA
<213> Homo sapiens

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<400> 18
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cacaagagac ttaaaggaca ggaggaggag atgg 154

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<210> 19
<211> 445
<212> DNA
<213> Homo sapiens

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<400> 19
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aattaaagtt gaacaaattg aagcagggac accaggccga ctcagagtag tagctcagtc 120
caccaatagt gaggaaatca ttgaaggaga atataatacg gtgatgctgg caataggaag 180
agatgcttgc acaagaaaaa ttggcttaga aaccgtaggg gtgaagataa atgaaaagac 240
tggaaaaata cctgtcacag atgaagaaca gaccaatgtg ccttacatct atgccattgg 300
cgatatattg gaggataagg tggagctcac ccagttgca atccaggcag gaagattgct 360
ggctcagagg ctctatgcag gttccactgt caaagtgtga ctatgaaaat gttccaacca 420
ctgtatttac tcctttggaa tatgg 445

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<210> 20
<211> 211
<212> DNA
<213> Homo sapiens

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<400> 20
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atcccagagg acccataagt gccggtgaca agctgtctgt caggggagag gctccagaac 120
ctgggttcgt cccagtgag accggaggat gatcccccaa ggactgcgca gcatcagctc 180

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ttggtgggcc tctgccttct cttctgtttg g

211

<210> 21

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<212> DNA

<213> Homo sapiens

<400> 21

tgccctgta	ttggattgcc	acacggctca	cattgcatgc	aagtttgctg	agctgaagga	60
aaagattgat	cgccgttctg	gtaaaaagct	ggaagatggc	cctaaattct	tgaagtctgg	120
tgatgctgcc	attgttgata	tggttcctgg	caagcccatg	tgtgttgaga	gcttctcaga	180
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<210> 22

<211> 277

<212> DNA

<213> Homo sapiens

<400> 22

ggaaccatgt	ggccggcgcc	cttgatcgtg	agaaaggcga	tgtgggagaa	ctccttcacg	60
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tccatcttct	ggttgaggga	atccacaaac	cactcatccc	ccatgaaatt	gcaggccatg	180
tctacatctc	cattatataa	taggatctgg	gatttctgtg	agctaagcag	cttcagatac	240
tgggagttca	tgcttcggta	gagacggcgg	tactgta			277

<210> 23

<211> 634

<212> DNA

<213> Homo sapiens

<400> 23

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atggagggag	gattttatgg	agaaatgggg	atagtcttca	tgaccacaaa	taaataaagg	180
aaaactaagc	tgcatgtgtg	gttttgaaaa	ggttattata	cttcttaaca	attctttttt	240
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tgctctattt	tagatagatt	aacattaacc	aacataattt	tttttagatc	gagtcagcat	360
aaatttctaa	gtcagcctct	agtcgtgggt	catctctttc	acctgcattt	tatttggtgt	420
ttgtctgaag	aaaggaaaga	ggaaagcaaa	tacgaattgt	actatttgta	ccaaatcttt	480
gggattcatt	ggcaaataat	ttcagtgtgg	tgtattatta	aatagaaaaa	aaaaattttg	540
tttcctaggt	tgaaggtcta	attgatacgt	ttgacttatg	atgaccattt	atgcactttc	600
aatgaattt	gctttcaaaa	taaatgaaga	gcag			634

<210> 24

<211> 512

<212> DNA

<213> Homo sapiens

<400> 24

gcaaaacaag	cctaagcaag	cacaacgaag	agcagaagtc	agtgaatta	aaaagaggaa	60
aaagaaaaat	cataaaaatc	ataaaaagtt	atttctttga	aaagatcaat	gaaatttagc	120



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aagactgaca cagataaaaa ggaattagac ccaaatacagt gaacaggaat gaaatagagg 180
atatcactac agaggctgca gccattgaaa ggataattag gaaatcccac agataacttt 240
gtgctcataa atttgacaat gtagaggaaa tatcttttagt ttttaattagc tttttatttt 300
agttttttctc aaaaactaaa acttaataaa actcaaccaa gacaaaatag acaatcagaa 360
tgtaggcata cctcagagat gtggcggatt tggtttcaga ctactgcaat aaaccaaata 420
tggcaataaa aggagtcaca gaaagtgggt tcccagtgta tatatataaa agttacattt 480
actctatgaa gtgcaataac attttgtcta aa 512

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<210> 25

<211> 461

<212> DNA

<213> Homo sapiens

<400> 25

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aaagaacatt cgtgggtgggt tagtgatgag gttaatatc ccctcttggt cacctccaca 180
ttggaaaaac cacgttggac tgagttttga ggagcaaaga actaatcact tgaccaaagg 240
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ggatacctga aaatgtgatt ttatatattc ttggcatcca ggggagaaaa atcaaaaagc 360
aaggaagtta cagttatctc cccagaaatt aatgggtcat gtcaagacta taggttttca 420
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<210> 26

<211> 317

<212> DNA

<213> Homo sapiens

<400> 26

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taggatttat tacactaaaa aaaaattagt ttttgaaaag aaataggaga atacagaaac 120
atgaatttca cgaggctatc atctaacagt gggggccttc tacacacgtg gtgccaaaat 180
gtgtcattct gagtcaattg caattcctct ctaggagtga aaagagataa aagataagcc 240
aagaaccctg gacagattct tgggtgttgg gacaaagagg aaaggacctg agaatggggc 300
tgggtggggag agggggg 317

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<210> 27

<211> 250

<212> DNA

<213> Homo sapiens

<400> 27

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taattgctgt gattattaga attctatcat gactgtattg tagtttttgc tctattycag 60
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ttcttcattt attttttctt cctaccactg agttttgtta tgaattcctt gtgtatacaa 180
gcaatacagg tgaatactaa actgttattt ttagcttctt caaaagctat tttagaaagc 240
ttcctggaaa 250

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<210> 28

<211> 532

<212> DNA

<213> Homo sapiens

<400> 28



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cctatatcat tcatttatac agaagctgct tgctgcttag caagttggtg ggtttgattt 60
tccttggttg ctttgcagac ctcccttgag aggattcctt ctggatggag atttctttgt 120
tgctgtctcc cttgccacaa ctctgaccaa gattgcattg cgctatgtag ctttggttca 180
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ggaatgcaga cagtcccttt ctacatggtt atctgctaaa ctagaagaag agaaattatc 420
ccaaaagaaa gaatctgaaa agaggaatgt gacagtacag cctgatgacc ccatttcctt 480
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<210> 29

<211> 486

<212> DNA

<213> Homo sapiens

<400> 29

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ctctctattg tcatgttgct tctttctgca aatatatctt acaagttaga ctttaaacct 120
ttgatctccc acaccaaag agaaaataat atttatatgg aagtaatttt attttagtgt 180
ttgtgattta ttgtggagag caggbgttta aaaatttttag aatttctttt taacaaaatc 240
aaatacattg ttaaggtaac aaagaataat tcactatttc agcatttcaa agcaacatat 300
tctacaactt caaagatatt tgcaaaaata atacaactgt tgaagttcaa atgttatgga 360
aagaaacatt agaagtatga aaagtggtag aaaaacatgt ttctttttat tctcttgga 420
atatatctat atatttagga aaatacatat atgtatgtgt atgtatatat atgtatgaaa 480
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<210> 30

<211> 240

<212> DNA

<213> Homo sapiens

<400> 30

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aatgtctctt gacccagtt ccaagttcac cctgttgccg gttcttctc ccaccttttg 120
gggttctata actgcatccc ccacacatct ttcaccacca cccatacat accagctctc 180
ctgttggtggg attcaggaca taggaagagt tgctgaaggc acgggtgctt ttgggattcg 240

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<210> 31

<211> 233

<212> DNA

<213> Homo sapiens

<400> 31

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ccattgatgc aggatatcgg cacattgact gtgcctatgt ctatcagaat gaacatgaag 60
tgggggaagc catccaagag aagatccaag agaaggctgt gaagcgggag gacctgttca 120
tcgtcagcaa gttgtggccc actttctttg agagaccct tgtgaggaaa gcctttgaga 180
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<210> 32

<211> 233

<212> DNA

<213> Homo sapiens



<400> 32  
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 ggcttggggg caagaaacag ccagcaagag ttaggggcct tagggcactg ggctgttggt 180  
 ccattgaagc cgactctggc cctggccctt acttgcttct ctagctctct agg 233

<210> 33  
 <211> 319  
 <212> DNA  
 <213> Homo sapiens

<400> 33  
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 ctggaattgc ttggttctcc tccatgtggc ctctccagta ggctagctca ggcttattca 120  
 catgatggct tcaggattcc aaagagagtg agagtagaag ctgaaagact tcttgagtgc 180  
 ttggcctgga actgggacta ggacagtgtc acttctgcta agttcttttg gtcagagcaa 240  
 atcacaaggc tttacccaga ttcaagggat gagaaacaga ctacatgtct tgatgagggg 300  
 aaccacaaag agcttgtgg 319

<210> 34  
 <211> 340  
 <212> DNA  
 <213> Homo sapiens

<400> 34  
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 caactgccag atggatgttg ctggaagtca gaggacattc tcgtgggttc gtgggcctag 120  
 ggtacaaatg acctcagcgt gacagcaaac aggacagaga agaccaggct cttactcagg 180  
 aatccaccag ccaggagaat gacaatgttg aacaccggaa ccctgatgat atctgtcaca 240  
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 tgggtcacag ttctgggggct ggtatagagt gggcacaagg 340

<210> 35  
 <211> 170  
 <212> DNA  
 <213> Homo sapiens

<400> 35  
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 ggcaggagaa tccacggatg taatgttttc acctttttcc ctgaggggtgc tttctgagga 120  
 accagycctt aagaggtggg gtcttggatt cctgaccag gcgtccggca 170

<210> 36  
 <211> 475  
 <212> DNA  
 <213> Homo sapiens

<400> 36  
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 ttgatctccc acaccaaaa agaaaataat atttatatgg aagtaatttt atttttagtgt 180  
 ttgtgattta ttgtggagag cagggtgttta aaaatttttag aatttcttta acaaaattct 240  
 aaagagaaaa taaaaaagaa atcacagtat ttacagagat aacagaatgg cttagccatg 300  
 caaaacaaat aacttttggt tttcccttt tacttttggt taaatgttga ccaagattca 360



atttttttttc ctgccaaata aaacttcaat aaaagttag aggcaaaata acgtatttttc 420  
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<210> 37  
 <211> 246  
 <212> DNA  
 <213> Homo sapiens

<400> 37  
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 cgaaggagat ctggtctccc acaatgaagg tcttgccctcc ctgggttctgg gacagcaggg 180  
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 agttgg 246

<210> 38  
 <211> 512  
 <212> DNA  
 <213> Homo sapiens

<400> 38  
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 cctttgtagg aatgaagaat ggcaacgaaa gatggggcct taaattggat gccacttttg 240  
 gactttcatc ataagaagtg tctggaatac ccgttctatg taatatcaac agaaccttgt 300  
 ggtccagcag gaaatccgaa ttgcccatac gctcttgggc ctccaggaaga gggtgaacaa 360  
 aaacaaattc ttttaattca acgggtgctt tacataatga aaaaaccact tgtggcacac 420  
 gatgggcac taaatcatc atcttcta atgtgttgaga ttttcatttc aaatatattt 480  
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<210> 39  
 <211> 370  
 <212> DNA  
 <213> Homo sapiens

<400> 39  
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 tgccctycca tctccctaac cccccctcac agggatgcct cctcccaagg ctccagaaac 180  
 tctgaccctc gcaactgctg agggagccca tgaattgctg gtcaatatcg ctcatcctct 240  
 akactccatc ctgcgtgtgc ttcttcctac aagagctaga gaggcactga ctgataaata 300  
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 tcttaaatgg 370

<210> 40  
 <211> 204  
 <212> DNA  
 <213> Homo sapiens

<400> 40  
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 ggagcagagc agaccttggt tttagtgggt ccatgggata aaatgggatt ggaggagcta 120  
 gaagaattca gggctctggt caatctgcc gtcttcctga aatatcgaaa atacaccagg 180



gctgctatat cagagccacc ctgg

204

<210> 41

<211> 447

<212> DNA

<213> Homo sapiens

<400> 41

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tcaagcaagc acttgacaag attccacagg ccatagagat tttcttctga gaagaatttg 120
tgtttaattt tttgatacca aactgaaca ttcattcaggg aactttcctg aagttcagct 180
caagactacc ctacctgctg tgtttgtgag aagagtagga tcacacacac aggtgcaatc 240
ttgaccacac ttacctgcaa gaggagtaac cagaggacac acttccttcc ttctttggtg 300
tctgaggagt gtgaactggt ggggtcagtt aagacccaac ataactctat cagaagaaaa 360
ctgttggttg cctttcaacc ttgttttaca gttctgcagt gtagtggagg acgggcaacg 420
tgcattgtgca ggctcaccac tcccagg 447
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<210> 42

<211> 498

<212> DNA

<213> Homo sapiens

<400> 42

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attagattct cattgcactg aactatatat atatgcctaa gtatgtagaa gtaaaattat 120
atacccaaaa aggattttat cttgttggtat atattaaatg ttatttctgc atatagggtc 180
ttttatggag aaactgatga tgataagctt aatactcact tgtttagcag catctgaatg 240
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ttgcattact tcagcagcag aaagtacatc cttggacttg gaagatttca ttccagattc 480
cagatgtggg atcataga 498
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<210> 43

<211> 312

<212> DNA

<213> Homo sapiens

<400> 43

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ttcatgacag tgtctgggct gccaaagaag cagtgccctt gtgatcattt caagggcaat 120
gtgaagaaaa caagacacca aaggcaccac agaaagccaa acaagcattc cagagcctgc 180
cagcaatttc tcaaacaatg tcagctaaga agctttgctc tgcctttgta ggagctctga 240
gcgcccactc ttccaattaa acattctcag ccaagaagac agtgagcaca cctaccagac 300
actcttcttc tc 312
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<210> 44

<211> 417

<212> DNA

<213> Homo sapiens

<400> 44

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ttttccgtaa attacttatt ctataaaatt ggagtaggcc ataaactttg gagggcccta 180  
 gaccaatttt ttggattatt ttctgtcttc tatcattccg ctgatcttag atattctctg 240  
 cattaaatat taaatatcac ttctaggctg aaaaatcccc ctaaaaatat ttctagctca 300  
 gatttttcct ccaaattctg caatagaaga tcacaatgtg aactctgcat ctccatgtta 360  
 aagtctaata gacattcaca cttagcatgt ctcaaagaaa tctcatgtaa accatgg 417

<210> 45

<211> 494

<212> DNA

<213> Homo sapiens

<400> 45

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 tgggtgcatgt acacgtgtgt gtgtgtatgc gtgtaggagc tcacacttgt gtacacgttt 120  
 gtgtgcatgc atgtgtgcag gagcttgacac gtttgtggtg ggtacatgta catatgtgag 180  
 tgatcctgtg tgcaagcccc catgtggaca tggctatgag tgagcgtgga gccaaaagcc 240  
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 ggtgtgaatc atgcagcagg cccactgtgc gtgtctgaga cgggtctgtg cagggactgg 360  
 gtgtgaatca gtgaccgtgt ctctgaccaa catgctgaat tacaaattga taatttatta 420  
 acctgtgcag caacaaataa gatttttcaa aactcaacaa agtgctcaaa gttgacatta 480  
 cttgcttcaa agtt 494

<210> 46

<211> 516

<212> DNA

<213> Homo sapiens

<400> 46

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 gtcatttgat cattcaactc tttgtcagtg gcaactcccg ctatttttgt gtgttggttt 180  
 gttactacac agtgagcaca aacatgggtg tccaatacag aggtcttcc tgtcagggtg 240  
 caaccagaaa gttcatctaa cactgtgata tttgcatcct tcttgaacag ttgttggtctg 300  
 aagattcatt tgatgaatcg atttttcaaa agagatgatt cttgggttct cagagcgtc 360  
 agctctcccg ccgagcttct ttgagacgtc ctcagggtgc ctttgacgat gcgtcctcca 420  
 ctttcacaca ctctagcatt ctttcaactg ggtcttcatt gccccacatt gggcagccag 480  
 gaatgttggg gtgatcagac acaacaccag gtcatg 516

<210> 47

<211> 459

<212> DNA

<213> Homo sapiens

<400> 47

ccaattcaga gtggcattct gcatttctgt ggcttccaag tcttagaacc tcaactgaca 60  
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 cgcctggaga atatttgga tgagacacca ctgtattttg ctccaagcag cctctttgac 180  
 ctaaacttcc aggcaggatt cttaatgaaa aaagaggtag aggatgagga gaaaaacaag 240  
 aaatttggtc tttctgtggg ccatacactg ggcaagtcca tcccaactga caaccagatc 300  
 aaagctagaa aatgagattc cttagcctgg atttccttct aacatgttat caaatctggg 360  
 tatctttcca ggcttccctg acttgcttta gtttttaaga tttgtgtttt tctttttcca 420  
 caaggaataa atgagaggga atcgaksaaa aaaaaaaaaa 459

<210> 48



<211> 430  
 <212> DNA  
 <213> Homo sapiens

<400> 48  
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 tcgtttctcac cattcagcca ctgataggag ccatcgctgc aggaaatgct gtgattataa 120  
 agcctttctga actgagtgaa aatacagcca agatcttggc aaagcttctc cctcagtatt 180  
 tagaccagga tctctatatatt gttattaatg gtggtgttga ggaaaccacg gagctcctga 240  
 agcagcagatt tgaccacatt ttctatacgg gaaacactgc gggttgcaaa attgtcatgg 300  
 aagctgctgc caagcatctg acccctgtga ctcttgaact gggagggaaa agtccatgtt 360  
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 tgaattgtgg 430

<210> 49  
 <211> 288  
 <212> DNA  
 <213> Homo sapiens

<400> 49  
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 aaaatcttca attggattat gttgacctct accttattca ttttccagtg tctgtaaagc 180  
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<210> 50  
 <211> 411  
 <212> DNA  
 <213> Homo sapiens

<400> 50  
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 ggcaggatac tgaaagtctg cagggctcctt cagtttacct gtgatgtcct ttctggaaat 360  
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<210> 51  
 <211> 503  
 <212> DNA  
 <213> Homo sapiens

<400> 51  
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 acagaagtga atgcttatat atattatgat agccttaaac ctttttctc taatgcctta 420  
 actgtcaaat aattataacc ttttaaagca taggactata gtcagcatgc tagactgaga 480



ggtaaacact gatgcaatta aga

503

<210> 52

<211> 503

<212> DNA

<213> Homo sapiens

<400> 52

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<210> 53

<211> 531

<212> DNA

<213> Homo sapiens

<400> 53

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<210> 54

<211> 450

<212> DNA

<213> Homo sapiens

<400> 54

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<210> 55

<211> 648

<212> DNA

<213> Homo sapiens



&lt;400&gt; 55

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gacccttgat atttttgctg gccccctaa ttatccattt tctgatgaat attaacatgg 480
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&lt;210&gt; 56

&lt;211&gt; 536

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 56

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ccacacaaca tacgagcccg aagcataaag tgtaaagcct ggggtgccta atgagt 536

```

&lt;210&gt; 57

&lt;211&gt; 391

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 57

```

aggaactact gtcccagagc tgaggcaagg ggattttctca ggtcatttgg agaacaagtg 60
ctttagtagt agtttaaagt agtaactgct actgtattta gtgggggtgga attcagaaga 120
aatttgaaga ccagatcatg ggtggtctgc atgtgaatga acaggaatga gccggacagc 180
ctggctgtca ttgctttctt cctccccatt tggacccttc tctgccctta catttttgtt 240
tctccatcta ccaccatcca ccagtctatt tatttgtcta gttggatttc atttcttctg 300
gaaaatttat tgtttattgg catgtgacct ttgactgatg gcttcattag cattytgttt 360
ttcttttttg atccttaata gaaaactcaa t 391

```

&lt;210&gt; 58

&lt;211&gt; 455

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 58

```

gaagacatgc ttacttcccc ttcaccttc ttcatgatgt gggaagagtg ctgcaaccca 60
gccctagcca acgccgcatg agagggagtg tgccgagggc ttctgagaag gtttctctca 120
catctagaaa gaagcgctta agatgtggca gccctcttc ttcaagtggc tcttgtcctg 180
ttgccctggg agttctcaaa ttgctgcagc agcctccacc cagcctgagg atgacatcaa 240
tacacagagg aagaagagtc aggaaaagat gagagaagtt acagactctc ctgggcgacc 300

```



```

ccgagagctt accattcctc agacttcttc acatgggtgct aacagatttg ttcctaaaag 360
taaagctcta gaggccgtca aattggcaat agaagccggg ttccaccata ttgattctgc 420
acatgtttac aataatgagg agcagggttg actgg                                     455

```

```

<210> 59
<211> 398
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> 264, 266
<223> n = A,T,C or G

```

```

<400> 59
ctcagaggca gcgtagcgggt gtgctctttg tgaaattcca ccatggcgta ccgtggccag 60
ggtcagaaaag tgcagaagggt tatgggtgcag cccatcaacc tcatcttcag atacttacia 120
aatagatcgc ggattcagggt gtggctctat gagcaagtga atatgcggat agaaggctgt 180
atcattgggtt ttgatgagta tatgaacctt gtattagatg atgcagaaga gattcattct 240
aaaacaaagt caagaaaaca actngntcgg atcatgctaa aaggagataa tattactctg 300
ctacaaagtg tctccaacta gaaatgatca atgaagtgag aaattgttga gaaggataca 360
gtttgttttt agatgtcctt tgtccaatgt gaacattt                                     398

```

```

<210> 60
<211> 532
<212> DNA
<213> Homo sapiens

```

```

<400> 60
gacttctgag acctgggggca cccggggcctt tgcggcagct actggcaggg cctggccacc 60
tcataggact cagttccctt ctgaacactc gggggacatg ggcctctaac tgcccactct 120
gatatgcctg ggtgagccta ggagggaagg ctctgatttg gatttctcca gtcaaagctc 180
acagaaaaaa acctggcact ttgattttca tgggatgggt ctaacagggt cagtcacctc 240
cgagcagttt gggaacccag tttcttggtc tgggccctca ggtcagcctg gctgaattag 300
gacccttcct tggcacagggt gtgagaaaga gcttggggaa cgcttggcat tatggagggc 360
tggaagggggc tcaaccccga tttggagaga agtttgggat ggagtgggcg agagattgag 420
agagcgagca ggaaaagagg tcttggagcc tgggactgat ggtggataag gcctggaaaag 480
aasatgacsa ggaggaggag agagggaagt ggggtggatga ggagcaggct ga                                     532

```

```

<210> 61
<211> 466
<212> DNA
<213> Homo sapiens

```

```

<400> 61
gcgacggcga cgtctctttt gactaaaaga cagtgtccag tgctccagcc taggagtcta 60
cggggaccgc ctcccgcgcc gccaccatgc ccaacttctc tggcaactgg aaaatcatcc 120
gatcgaaaaa cttcgaggaa ttgctcaaag tgctgggggt gaatgtgatg ctgaggaaga 180
ttgctgtggc tgcagcgtcc aagccagcag tggagatcaa acaggaggga gacactttct 240
acatcaaaac ctccaccacc gtgcgcacca cagagattaa cttcaagggt ggggaggagt 300
ttgaggagca gactgtggat gggaggccct gtaagagcct ggtgaaatgg gagagtgaga 360
ataaaatggt ctgtgagcag aagctcctga agggagaggg cccaagacc tcgtggacca 420
gagaactgac caacgatggg gaactgatcc tgaccatgac ggcgga                                     466

```



<210> 62  
 <211> 548  
 <212> DNA  
 <213> Homo sapiens

<400> 62  
 ttttgaattt acaccaagaa cttctcaata aaagaaaatc atgaatgctc cacaatttca 60  
 acataccaca agagaagtta atttcttaac attgtgttct atgattattt gtaagacctt 120  
 caccaagttc tgatatcttt taaagacata gttcaaaatt gcttttgaaa atctgtattc 180  
 ttgaaaatat ccttggttggtg tattagggtt ttaaatacca gctaaaggat tacctcactg 240  
 agtcatcagt accctcctat tcagctcccc aagatgatgt gtttttgctt accctaagag 300  
 aggttttctt cttattttta gataattcaa gtgcttagat aaattatgtt ttctttaagt 360  
 gtttatggta aactctttta aagaaaattt aatatgttat agctgaatct ttttggtaac 420  
 tttaaatctt tatcatagac tctgtacata tgttcaaatt agctgcttgc ctgatgtgtg 480  
 tatcatcggg gggatgacag aacaaacata tttatgatca tgaataatgt gctttgtaaa 540  
 aagatttc 548

<210> 63  
 <211> 547  
 <212> DNA  
 <213> Homo sapiens

<400> 63  
 tttccaaagc ggagacttcc gacttcctta caggatgagg ctgggcattg cctgggacag 60  
 cctatgtaag gccatgtgcc ccttgcccta acaactcact gcagtgtctt tcatagacac 120  
 atcttgccagc atttttctta aggctatgct tcagtttttc tttgtaagcc atcacaagcc 180  
 atagtggtag gtttgccctt tggtagagaa ggtgagttaa agctgggtgga aaaggcttat 240  
 tgcattgcat tcagagtaac ctgtgtgcat actctagaag agtagggaaa ataattgctt 300  
 ttacaattcg acctaatatg tgcattgtaa aataaatgcc atatttcaaa caaaacacgt 360  
 aattttttta cagtatgttt tattaccttt tgatatctgt tgttgcaatg ttagtgatgt 420  
 tttaaaatgt gatcgaaaat ataattgctt taagaaggaa cagtagtgga atgaatgtct 480  
 aaaagatctt tatgtgttta tggctctgcag aaggattttt gtgatgaaag gggatttttt 540  
 gaaaaat 547

<210> 64  
 <211> 528  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> 374, 443, 444, 452, 476, 489, 515, 523  
 <223> n = A,T,C or G

<400> 64  
 cacctmctcc cscwggcgc ttwctcsgac gccttgccca scgggcccgc cgacccccctg 60  
 srccatggac cccgctcgcc csetggggmt gtygatketg ctgcttttcc tgrckgaggc 120  
 tgcactgggc gatgctgac argagccaac aggaaataac rcggagatct gkctcctgcc 180  
 cctagactac kgaccctgcc kggccctact tytccgytac tactacgaca ggyacacgca 240  
 gagctgccgc cwgttctgk rckggggctg crasggcaac rccaacwatt yctacacckg 300  
 kgaggmttrc gackatgctw gstggargat agaaaaagtt cccaaasttt gccggctgma 360  
 agtgaatgag gacnaccagg gtgaggggta cacagataag tatttcttta atctaakkwc 420  
 catgacatgw gaaaaattct ttnncggtgg gngtcaccgg accggattga gaacangttt 480  
 gcagatgang ctactgggat gggctcctgc rcacnaaaga aantatca 528



<210> 65  
 <211> 547  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> 408  
 <223> n = A,T,C or G

<400> 65  
 kgaatgaasa acgaacgctg gaagtagaaa tagagcctgg ggtgagagac ggcatggagt 60  
 acccctttat tggagaaggt gagcctcacg tggatgggga gcctggagat ttacggttcc 120  
 gaatcaaagt tgtcaagcac ccaatatattg aaaggagagg agatgatttg tacacaaatg 180  
 tgacagtctc attagttgag tcaactgggtg gctttgagat ggatattact cacttggatg 240  
 gtcacaaggt acatatattcc cgggataaga tcaccaggcc aggagcgaag ctatggaaga 300  
 aaggggaagg gctccccaac tttgacaaca acaatatcaa gggctctttg ataatacactt 360  
 ttgatgtgga ttttccaaaa gaacagttaa cagaggaagc gagagaangt atcaaacagc 420  
 tactgaaaca agggtcagtg cagaagggtat acaatggact gcaaggatat tgagagtga 480  
 taaaattgga ctttggtttaa aataaagtga ataagcgata tttattatct gcaagggtttt 540  
 ttttgtg 547

<210> 66  
 <211> 535  
 <212> DNA  
 <213> Homo sapiens

<400> 66  
 ggggaggtct acgcttctag agcttgagcc agcggggcga ccctgcagtg gcaggactcg 60  
 gcaccgcgcc ctccaccgcc ggttggtggc ctgcgtgaca gtttcctccc gtcgacatcg 120  
 aaaggaagcc ggacgtgggc gggcagagag cttcatcgca gtaggaatgg cagccccatc 180  
 tatgaaggaa agacaggtct gctggggggc ccgggatgag tactggaagt gtttagatga 240  
 gaacttagag gatgcttctc aatgcaagaa gttaagaagc tctttcgaat caagttgtcc 300  
 ccaacagtggt ataaaatatt ttgataaaaag aagagactac ttaaaattca aagaaaaatt 360  
 tgaagcagga caatttgagc cttcagaaaac aactgcaaaa tcctaggctg ttcataaaga 420  
 ttgaaagtat tctttctgga cattgaaaaa gctccactga ctatggaaca gtaatagttt 480  
 gaatcatagt gaacatcaat acttgttccc tatatacgac acttgataat taaga 535

<210> 67  
 <211> 527  
 <212> DNA  
 <213> Homo sapiens

<400> 67  
 atttctgcca cttaattcaa acagtcatat gcaggctcgt taatttatatt gtgcttttgt 60  
 ttcactcttct acaaggccct cttagctcta aaacttgaca gtggaataag gaaatgtttt 120  
 tccaaatctg cattgccggt gagatcctca acatcagcat gttgagatgg acctcaaccc 180  
 cacctctaac cctgaaacac actactcgat attatcttag gtatgtttta gggtttagtt 240  
 tgtaaaataa taatttatatt ttgaaggaaa tataaaatat taaagagtaa taatagctat 300  
 catttttttaa gattcaatct aaaacaatgg actctttttt tttccatttg tgatgtagat 360  
 aagcaagaca attttgatca tgagtgggtga aaagaggatc aaacttgact attcttgcaa 420  
 tggcagtgcca gcaacaagcc tttcatttac attaaattat aacttttcat tcattcctaa 480  
 accaaactta aaattctgct ttcctttgag tagaagggtat ttaactt 527



<210> 68  
 <211> 431  
 <212> DNA  
 <213> Homo sapiens

<400> 68  
 gggaaacttc atgggtttcc tcatctgtca tgtcgatgat tatatatgga tacatttaca 60  
 aaaataaaaa gcgggaattt tcccttcgct tgaatattat ccctgtatat tgcataaatg 120  
 agagatttcc catatttcca tcagagtaat aaatataactt gctttaattc ttaagcataa 180  
 gtaaacaatga tataaaaaata tatgctgaat tacttgtgaa gaatgcattt aaagctattt 240  
 taaatgtgtt tttatttgta agacattact tattaagaaa ttggttatta tgcttactgt 300  
 tctaattctgg tggtaaagggt attcttaaga atttgcagggt actacagatt ttcaaaactg 360  
 aatgagagaa aattgtataa ccatcctgct gwtccttttag tgcaatacaa taaaactctg 420  
 aaattaaaac t 431

<210> 69  
 <211> 399  
 <212> DNA  
 <213> Homo sapiens

<400> 69  
 gacacggcgg acacacacaa acacagaacc acacagccag tcccaggagc ccagtaatgg 60  
 agagccccaa aaagaagaac cagcagctga aagtcgggat cctacacctg ggcagcagac 120  
 agaagaagat caggatacag ctgagatccc agtgcgcgac atggaagggtg atctgcaaga 180  
 gctgcatcag tcaaacaccg gggataaatc tggatttggg ttccggcgctc aaggtgaaga 240  
 taatacctaa agaggaacac tgtaaaatgc cagaagcagg tgaagagcaa ccacaagttt 300  
 aatgaagac aagctgaaac aacgcaagct ggtttttatat tagatatattg acttaaaacta 360  
 tctcaataaa gttttgcagc tttcaccaar aaaaaaaaaa 399

<210> 70  
 <211> 479  
 <212> DNA  
 <213> Homo sapiens

<400> 70  
 cgcgggcggag ctgtgagccg gcgactcggg tccctgaggt ctggattctt tctccgctac 60  
 tgagacacgg cggacacaca caaacacaga accacacagc cagtcccagg agcccagtaa 120  
 tggagagccc caaaaagaag aaccagcagc tgaaagtcgg gatcctacac ctgggcagca 180  
 gacagaagaa gatcaggata cagctgagat cccagggtgct gggaaggga atgcgcgaca 240  
 tggaagggtga tctgcaagag ctgcatcagt caaacaccgg ggataaatct ggatttgggt 300  
 tccggcgctca aggtgaagat aatacctaaa gaggaacact gtaaaatgcc agaagcagggt 360  
 gaagagcaac cacaagttta aatgaagaca agctgaaaca acgcaagctg gtttttatatt 420  
 aggatatttg acttaaaacta tctcaataaa gttttgcagc tttcaccaaa aaaaaaaaaa 479

<210> 71  
 <211> 437  
 <212> DNA  
 <213> Homo sapiens

<400> 71  
 ctcagcgggt gccaacagat catgagccat cagctcctct ggggccagct ataggacaac 60  
 agaactctca ccaaaggacc agacacagtg rgcaccatgg gacagtgtcg gtcagccaac 120  
 gcagaggatg ctcaggaatt cagtgatgtg gagagggcca ttgagaccct catcaagaac 180



```

tttcaccagt actccgtgga ggggtgggaag gagacgctga ccccttctga gctacgggac 240
ctggtcaccc agcagctgcc ccctctcatg ccgagcaact gtggcctgga agagaaaatt 300
gccaacctgg gcagctgcaa tgactctaaa ctggagttca ggagtttctg ggagctgatt 360
ggagaagcgg ccaagagtgt gaagctggag aggcctgtcc gggggcactg agaactccct 420
ctggaattct tggggggg                                     437

```

<210> 72

<211> 561

<212> DNA

<213> Homo sapiens

<400> 72

```

ggatgggtata ctgtaaattc agcatatgga gataccatta tcataccttg ccgacttgac 60
gtacctcaga atctcatgtt tggcaaatgg aaatatgaaa agcccgatgg ctccccagta 120
tttattgcct tcagatcctc tacaaagaaa agtgtgcagt acgacgatgt accagaatac 180
aaagacagat tgaacctctc agaaaactac actttgtcta tcagtaatgc aaggatcagt 240
gatgaaaaga gatttgtgtg catgctagta actgaggaca acgtgtttga ggcacctaca 300
atagtcaagg tgttcaagca accatctaaa cctgaaattg taagcaaagc actgtttctc 360
gaaacagagc agctaaaaaa gttgggtgac tgcatttcag aagacagtta tccagatggc 420
aatatcacat ggtacaggaa tggaaaagtg ctacatcccc ttgaaggagc ggtggtcata 480
atttttaaaa aggaaatgga cccagtgact cagctctata ccatgacttc caccctggag 540
tacaagacaa ccaaggctga c                                     561

```

<210> 73

<211> 916

<212> DNA

<213> Homo sapiens

<400> 73

```

ggagaaaaata aggtggagtc ctacttgttt aaaaaatatg tatctaagaa tgttctaggg 60
cactctggga acctataaag gcaggatatt cgggccctcc tcttcaggaa tcttcctgaa 120
gacatggccc agtcgaaggc ccaggatggc ttttgctgcg gccccgtggg gtaggaggga 180
cagagagaca gggagagtca gcctccacat tcagaggcat cacaagtaat ggcacaattc 240
ttcggatgac tgcagaaaat agtggttttg agttcaacaa ctcaagacga agcttatttc 300
tgaggataag ctcttttaaag gcaaagcttt attttcatct ctcatctttt gtcctcctta 360
gcacaatgta aaaaagaata gtaatatcag aacaggaagg aggaatggct tgctggggag 420
cccatccagg aactggggag cacatagaga ttcacccatg tttgttgaac ttagagtcac 480
tctcatgctt ttctttataa ttcacacata tatgcagaga agatatgttc ttgttaacat 540
tgtatacaac atagccccaa atatagtaag atctatacta gataatccta gatgaaatgt 600
tagagatgct atatgataca actgtggcca tgactgagga aaggagctca cgcccagaga 660
ctgggctgct ctcccgagg ccaaaccxaa gaaggtctgg caaagtcagg ctgagggaga 720
ctctgccctg ctgcagacct cgggtgtggac acacgctgca tagagctctc cttgaaaaca 780
gaggggtctc aagacattct gcctacctat tagcttttct ttattttttt aacttttttg 840
ggggaaaagt attttttgaga agtttgtctt gcaatgtatt tataaatagt aaataaagtt 900
tttaccatta aaaaaa                                     916

```

<210> 74

<211> 547

<212> DNA

<213> Homo sapiens

<400> 74

```

agtggcatta acttttagaa tttgggctgg tgagattaat tttttttaat atcccagcta 60
gagatatggc cttaactga cctaaagagg tgtgttgtga ttaattttt tcccgttcct 120

```



```

ttttcttcag taaacccaac aatagtctaa ccttaaaaat tgagttgatg tccttatagg 180
tcactacccc taaataaacc tgaagcaggt gttttctctt ggacatacta aaaaatacct 240
aaaaggaagc ttagatgggc tgtgacacaa aaaattcaat tactgtcatc taatgccagc 300
tgttaaaagt gtggccactg agcatttgat tttataggaa aaaatagtat ttttgagaat 360
aacatagctg tgctattgca catctgttgg aggacatccc agatttgctt atactcagtg 420
cctgtgatat tgagtttaag gatttgaggc aggggtaatt attaaacata ttgcttctat 480
tcttggaaaa atagaagkgt aaaatgttaa taatacaaat gtcactgtga cctcctccac 540
tgagagg                                           547

```

<210> 75

<211> 793

<212> DNA

<213> Homo sapiens

<400> 75

```

tgaggaagtt gcaagccaac aaaaaagttc aaggatctag aagacgatta agggaaggtc 60
gttctcagtg aaaatccaaa aaccagaaaa aaatgtttat acaaccctaa gtcaataacc 120
tgacctaga aaattgtgag agccaagttg acttcaggaa ctgaaacatc agcacaaaga 180
agcaatcatc aaataattct gaacacaaat ttaatatattt tttttctgaa tgagaaacat 240
gagggaaatt gtggagttag cctcctgtgg agttagcctc ctgtggtaaa ggaattgaag 300
aaaatataac acctacacc ctttttctc ttgacattaa aagttctggc taactttgga 360
atccattaga gaaaaatcct tgtcaccaga ttcattacaa ttcaaatcga agagttgtga 420
actgttatcc cattgaaaag accgagcctt gtatgtatgt tatggataca taaaatgcac 480
gcaagccatt atctctccat gggaagctaa gttataaaaa taggtgcttg gtgtacaaaa 540
ctttttatat caaaaggctt tgcacatttc tatatgagtg ggtttactgg taaattatgt 600
tattttttac aactaatttt gtactctcag aatgtttgtc atatgcttct tgcaatgcat 660
attttttaat ctcaaacggt tcaataaaac catttttcag atataaagag aattacttca 720
rattgagtaa ttcagaaaaa ctcaagattt aagttaaaaa gtggtttgga cttgggaaca 780
ggactttata cct                                           793

```

<210> 76

<211> 461

<212> DNA

<213> Homo sapiens

<400> 76

```

accttgcact attccctca gtccatctat cgaggtcttt gcaggaagca tactgggaat 60
tgaaacgaga gcctaaatga catctaagaa aggcagtgtt caataccagg tattaggtga 120
ggatgggatt ctaaggacat cagtgggagg caggagacca ccttcagacc tcagcatgga 180
agcttccaag atccagagga agaggcaaca gcaactgagag tcataggtag aagaatcatc 240
acagccctgc taaccaggca gctgatgcc ctctcccttg gctccctgtg tccaaatcct 300
acaggggcat ctgttggtctg aactcaacct gaagccaaag agaagatgag tggagagagg 360
caacatttat agagctcagg tttctagggc tggagaggga tctggaggga cacacaggag 420
acacctggca taaccaaaaa atgattaaaa aaaaaaaaaa a                                           461

```

<210> 77

<211> 642

<212> DNA

<213> Homo sapiens

<400> 77

```

ggttgcacga aacacactgg ggaatggagc aaaacagtct ttgaatatcg aacacgcaag 60
gctgtgagac tacctattgt agatattgca ccctatgaca ttgggtggtec tgatcaagaa 120
tttggtgtgg acgttggccc tgtttgcttt ttataaacca aactctatct gaaatcccaa 180

```



```

caaaaaaaaaat ttaactccat atgtgttctt cttgtttctaa tcttgtcaac cagtgcaggt 240
gaccgacaaa attccagtta tttattttcca aaatgttttg aaacagtata atttgacaaa 300
gaaaaaatgat acttctcttt ttttgctgtt ccaccaaata caattcaaat gctttttgtt 360
ttatttttttt accaattcca atttcaaaaat gtctcaatgg tgctataata aataaacttc 420
aacactcttt atgataacaa aaaaaarawa wattctttga atcctagccc atctgcagag 480
caatgactgt gctcaccagt aaaagataac ctttctttct gaaatagtca aatacgaaat 540
tagaaaagcc ctccctattt taactacctc aactggtcag aaacacagat tgtattctat 600
gagtcccaga agatgaaaaa aattttatac gttgataaaa ct 642

```

<210> 78

<211> 519

<212> DNA

<213> Homo sapiens

<400> 78

```

gcagaagaag aagcggacct tccgcaagtt cacctaccgc ggcgtggacc tcgaccagct 60
gctggacatg tcctacgagc agctgatgca gctgtacagt gcgcgccagc ggcggcggct 120
gaaccggggc ctgcggcgga agcagcactc cctgctgaag cgcttgcgca aggccaagaa 180
ggaggcgccg cccatggaga agccggaagt ggtgaagacg cacctgcggg acatgatcat 240
cctacccgag atggtgggca gcatggtggg cgtctacaac ggcaagacct tcaaccaggt 300
ggagatcaag cccgagatga tcggccacta cctgggcgag ttctccatca cctacaagcc 360
cgtaaagcat ggccggcccg gcatcggggc caccactcc tcccgttca tccctctcaa 420
gtaatggctc agctaataaa aggcgcacat gactccaaaa aaaaaaaaaa aagggcggcc 480
gccaccgcgg gggagctcca cttttgttcc ctttaatga 519

```

<210> 79

<211> 526

<212> DNA

<213> Homo sapiens

<400> 79

```

gtctggaggc ggtgtcctct ccgcctgtc gggtcctgga tgagtaagag ttatggtcac 60
ggtcacagcc tgatctctta tgtgttcata gccattcgct ctcccatcag aactgtttgt 120
cctgaatgtg ttctcttagt tctagaaaat gaccactaat ttaaaaaact cggttgtgag 180
gtttgcccag aggcacttgt tccagaattt cccctcctgc ttcagccatg tccttgtcac 240
ttggcattct aagctaaagc tttagcttcc caattcgtga tgtgctaggc caagattcgg 300
gagctgttgc cagcctcgtc aaatatggaa gagaaacaac ctgcgggtcaa aaggagtgta 360
tttgtttaagt ggtgcgcgtc tatctcataa ctagatgtac caaccaggga agggccaagg 420
atggaaaggg gtaacttttg tgcttccaaa gtagctaagc agaagtgggg gagcagttta 480
gccagatgat ctttgattag gcaaacattg agtttttaag aggctg 526

```

<210> 80

<211> 281

<212> DNA

<213> Homo sapiens

<400> 80

```

gttatattag tgggtagtgt aacattttat ccagggttgg gtgaggggag atggccacag 60
tagcaagtgg tgacactaaa taccattttg aaggctgatg tgtatataca tcattactgt 120
ccgtagcaat gaaggataca gtactgtgtt gtgggtgagt gttgctattg cccagcatta 180
atatttgggt gtgtatgttt gaggctatga aacacgcagg agtgtttttg tgctattaat 240
ttaagagaa agcagctttt tcttaaaatt cactgttgag a 281

```

<210> 81



<211> 405  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> 219, 230, 261, 306  
 <223> n = A,T,C or G

<400> 81  
 gtgggtggga ggcggtgctg ttgggagttg cttggaggtt ggcgggcgcg ggctgaaggc 60  
 tagcaaaccg agcgatcatg tcgcacaaac aaatttacta ttcggacaaa tacgacsacg 120  
 aggagtttga statcgacat gtcatgctgc ccaaggacat akccaasctg gtccctaaaa 180  
 cccatctgat gtctgaatct gaatggagga atcttggcng ttcagmagan tcagggatgg 240  
 gtccattata tgatccatga nccagaacct cdcattctgc tgttccggcg scccacttac 300  
 cccaanaaac caamgaaatg aaccttggct actacttttc aatcctcaaa kcttttcaca 360  
 vhtgaccttc cttcctaaca ttctttmtga taaacattta ttaag 405

<210> 82  
 <211> 547  
 <212> DNA  
 <213> Homo sapiens

<400> 82  
 tagtttttaa gaagaaattt tttttggcct atgaaattgt taaacctgga acatgacatt 60  
 gttaatcata taataatgat tcttaaatgc tgtatggttt attattttaa tgggttaaagc 120  
 catttacata atatagaaag atatgcatat atctagaagg tatgtggcat ttatttggat 180  
 aaaattctca attcagagaa atcatctgat gtttctatag tcactttgcc agctcaaaag 240  
 aaaacaatac cctatgtagt tgtggaagtt tatgctaata ttgtgtaact gatattaaac 300  
 ctaaatgttc tgcctaccct gttggtataa agatattttg agcagactgt aaacaagaaa 360  
 aaaaaaatca tgcattctta gcaaaattgc ctagtatgtt aatttgctca aaatacaatg 420  
 tttgatttta tgcactttgt cgctattaac atcctttttt tcatgtagat ttcaataatt 480  
 gagtaatttt agaagcatta ttttaggaat atatagtkgt cacagtaaat atcttgtttt 540  
 ttctatg 547

<210> 83  
 <211> 529  
 <212> DNA  
 <213> Homo sapiens

<400> 83  
 ctatttctaag agatgctctt agtgatcttg cattacactt tctgaataaa atgaagatca 60  
 tgggtgattaa ggatattgaa agagaagaca ttgaattcat ttgtaagaca attggaacca 120  
 agccagttgc tcatattgac caatttactg ctgacatgct gggttctgct gagttagctg 180  
 aggaggtcaa tttaaattgt tctggcaaac tgctcaagat tacaggctgt gccagccctg 240  
 gaaaaacagt tacaattggt gttcgtgggt ctaacaaact ggtgattgaa gaagctgagc 300  
 gctccattca tgatgcccta tgtgttattc gttgtttagt gaagaagagg gctcttattg 360  
 caggaggtgg tgctccagaa atagagttgg cctacgatt aactgaatat tcacgaacac 420  
 tgagtggat ggaatcctac tgcgttcgtg cttttgcaga tgctatggag gtcattccat 480  
 ctacactagc tgaaaatgcc cggcctgaat cccatttcta cagtaacag 529

<210> 84  
 <211> 527  
 <212> DNA



<213> Homo sapiens

<400> 84

```

cccatcacca gaatcccttc atgggagggg tggatgcctg ttgaaactca ctgacctatt 60
ggactgacgc tgggggtggta tcttcatcag agctattgta agtcatccaa aaggcttctg 120
acgaaagaac aatTTTTTaaa aagtcctctt tttcaatcaa gccaatgtcc tatTTTtattt 180
ctaaaagttt tgggactcgt gctgttatca agtacaatga aaatggcttt ataaatagct 240
gttttgacat tgtgatagaa ggcttgaata cggaggaaag atgtcgctgg agctagtcct 300
gagttccgac tgtccctgtg gtgggaatcc agtctgggaa agcaggactg ttttagcaaa 360
cgtgtactcg ttctataaaa atggaatctg ttctgcaggt taccgtccct ccccgcccaa 420
gcatccctc tgtcctgtct ctctgctgct gggacccagg gctTTTTtcag ctgcagaacc 480
cactggactt ccaggaatca aggaaaaagt ggaaatgtcc aactgtg 527

```

<210> 85

<211> 401

<212> DNA

<213> Homo sapiens

<400> 85

```

cagtgtggtg gaattcccaa gatagaaatg aaaaactctt ttatagagtg ctgacatctg 60
acattgagaa attcatgcct attgtttata ctcccactgt gggctctggct tgccaacaat 120
atagtttggt gtttcggaag ccaagaggtc tctttattac tatccacgat cgagggcata 180
ttgcttcagt tctcaatgca tggccagaag atgtcatcaa ggccattgtg gtgactgatg 240
gagagcgtat tcttggttgg ggagaccttg gctgtaatgg aatgggcatc cctgtgggta 300
aattggctct atatacagct tgcggaggga tgaatcctca agaatgtctg cctgtcattc 360
tggatgtggg aaccgaaaat gaggagttag ttaaagatcc a 401

```

<210> 86

<211> 547

<212> DNA

<213> Homo sapiens

<400> 86

```

gaagcctctt gtgttttgtgt gcagagaagt atatgatcca ccatgctaata gacacttgcc 60
tttttttcca ccattaaggc tttaagaaca tgtggaataa gtttttttagc tgctaatagac 120
aaaacaaatc ctgtaactac ccagccagca agtatatagc acagaacact gtgttacttt 180
acaagggctt atgtgactgg aataagggtg tcccacttga ctgttccaaa gagcagcttc 240
tcagatcttc agtgttcact ggtaaatttc taacagtgtg tttgtgtaaa gtttgtcatt 300
tcatactcca tacactacag ttgctgtcac tgatccctgt tttgctggct tttaagctac 360
ttggtcaaaa atcctgcttc cttaaaacat agagaattaa tgagcatctc aagctttttc 420
ttttcctttt taatgatgcc tgcactatca agagtattct agtgttctct ctttgttttg 480
catataatca tgcaccaaac tttttatttc tttaagggtg gagtatattt ttatttccta 540
aatgcca 547

```

<210> 87

<211> 530

<212> DNA

<213> Homo sapiens

<400> 87

```

atggattcga aataccagkg tgtgaagctg aatgatggtc acttcatgcc tgtcctggga 60
tttggcacct atgcgcctgc agaggttcct aaaagtaaag ctctagaggc cgtcaaattg 120
gcaatagaag ccgggttcca ccatattgat tctgcacatg tttacaataa tgaggagcag 180
gttggaactg ccattccgaag caagattgca gatggcagtg tgaagagaga agacatatc 240

```



```

tacacttcaa agcttttgag caattcccat cgaccagagt tgggtccgacc agccttggaa 300
aggtcactga aaaatcttca attggactat gttgacctct atcttattca ttttccagtg 360
tctgtaaagc caggtgagga agtgatccca aaagatgaaa atggaaaaat actatttgac 420
acagtggatc tctgtgccac rtgggaggcc atggagaagt gtaaagatgc aggattggcc 480
aagtccatcg ggggtgtccaa cttcaaccac aggctgctgg agatgatcct 530

```

```

<210> 88
<211> 529
<212> DNA
<213> Homo sapiens

```

```

<400> 88
acctgagcta agaaggataa ttgtcttttg gtaactaggt ctacaggttt acatttttct 60
gtgttacact caaggataaa ggcaaaatca attttgtaat ttgttttagaa gccagagttt 120
atcttttcta taagttttaca gcctttttct tatatataca gttattgcca cctttgtgaa 180
catggcaagg gactttttta caatttttat tttattttct agtaccagcc taggaattcg 240
gttagtactc atttgtattc actgtcactt tttctcatgt tctaattata aatgaccaa 300
atcaagattg ctcaaaaggg taaatgatag ccacagtatt gctccctaaa atatgcataa 360
agtagaaatt cactgccttc cctcctgtc catgaccttg ggcacaggga agttctgggtg 420
tcatagatat cccgttttgt gaggtagagc tgtgcattaa acttgacat gactggaacg 480
aagtatgagt gcaactcaaa tgtgttgaag atactgcagt catttttgt 529

```

```

<210> 89
<211> 547
<212> DNA
<213> Homo sapiens

```

```

<400> 89
gtttatatat atagcgaata aatctagttg tataaatttt taaatgccgt cagtagaaag 60
cacacaagggt tatgattttt ttaattactg gcttctgatt tctttcactt ctgatecctt 120
tcctttttct cagatgtagc tgagtcttga tcattttaag acaacgatgg gtagaatttt 180
gagattaatg ttaattttcc ctttttggtt atttcagtcc cctctcacta tgcttttgtc 240
cagaaggatc aagaattcta ccatcccttg ggtctttgtg tataaacaat gttaaataaa 300
ggtagactca gtctttaaga tattagacag tttttttagt ccatgggatt gttaaataaa 360
acattaactt tcctataaga atattttggc tttgtaatct atagcctcaa attggatttt 420
attatggatt cactagacaa acagctgttt ccttattgtc ttttttcttt agtgtttctg 480
atttgctatc agtagctgtt tttaaagcca tccaaggaaa ataattattt acagtttttg 540
aagtcac 547

```

```

<210> 90
<211> 528
<212> DNA
<213> Homo sapiens

```

```

<400> 90
gagcagcaga agctgtacag caagatgatc gtggggaacc acaaggacag gagccgctcc 60
tgagcctgcc tccagctggc tggggccacc gtgcggggtg ccaacgggct cagagctgga 120
gttgccgccc cgcctccac tgetgtgtcc tttccagact ccagggctcc ccgggctgct 180
ctggatccca ggactccggc tttcgcagag ccgcagcggg atccctgtgc acccggcgca 240
gcctaccctt ggtggtctaa acggatgctg ctgggtgttg cgaccagga cgagatgcct 300
tgtttctttt acaataagtt gttggaggaa tgccattaaa gtgaactccc cacctttgca 360
cgctgtgcgg gctgagtggg tggggagatg tggccatggg cttgtgctag agatggcggt 420
acaagagtct gttatgcaag cccgtgtgcc agggatgtgc tgggggaggc caccgctct 480
ccaggaaagg cacagctgag gcactgtggc tggcttcggc ctcaacat 528

```



<210> 91  
 <211> 547  
 <212> DNA  
 <213> Homo sapiens

<400> 91  
 atataccatt taatacattt acactttctt atttaagaag atattgaatg caaaataatt 60  
 gacatataga actttacaaa catatgtcca aggactctaa attgagactc ttccacatgt 120  
 acaatctcat catcctgaag cctataatga agaaaaagat ctagaaactg agttgtggag 180  
 ctgactctaa tcaaagtga tgattggaat taraccmttt ggscyttgra ccttymtwrg 240  
 raaaawgrmc cmaccttityt taacmtgrac cwccytmatc tctagaagct gggatggact 300  
 tactatyctk gttwatatatt taaatackga aagggtgctat gcttctgtta ttattccaag 360  
 actggagata ggcagggcta aaaaggtatt attatTTTTc ctttaaatgat ggtgctaaaa 420  
 ttcttcctat aaaattcctt aaaaataaag atggtttaat cactaccatt gtgaaaacat 480  
 aactgttaga cttcccgttt ctgaaagaaa gagcatcggt ccaatgcttg ttcactgttc 540  
 ctctgtc 547

<210> 92  
 <211> 527  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> 393, 502  
 <223> n = A,T,C or G

<400> 92  
 gctggctagt aggggaacat gtagtagcca agcccatgca ttgcagtgca cagagcaaca 60  
 ttggggtaac aggatgggta cctgtcacgg cctgtgcaaa cataacatgt gtcaccacac 120  
 tgaaggatat gtggaacaag tggcctcacc aaggtcggac cccaatggac tttttgcctc 180  
 ttgggagctt atgggtctat gaggacacag tagcctttcc tatcagcaaa ctggagtgga 240  
 tgttgtatct ggggggtggcc ttatgtacct gctactgttc tccccacatt gccagatgc 300  
 ctgtataact gggaggcact gkgctctcag tttttgcgaa tgtgatgagc cccctggtgt 360  
 ttctaccctt ttggcaatga ctatccctgg agncatgtgt caaaactgta aagcacaatt 420  
 tactgctctt tgcggagcac accgctcatg ctctgaatta cacctgaktg tccctcctcc 480  
 wgktawtgaa tgaggttgat cnvatcagaa adgtggkggt ggcmata 527

<210> 93  
 <211> 531  
 <212> DNA  
 <213> Homo sapiens

<400> 93  
 ggtattcata cagccttcct aaaggcaatg ctttccacag gatttaagat accccagaaa 60  
 ggcatcctga taggcatcca gcaatcattc cggccaagat tccttggtgt ggctgaacaa 120  
 ttacacaatg aaggtttcaa gctgtttgcc acggaagcca catcagactg gctcaacgcc 180  
 aacaatgtcc ctgccacccc agtggcatgg ccgtctcaag aaggacagaa tcccagcctc 240  
 tcttccatca gaaaattgat tagagatggc agcattgacc tagtgattaa ccttcccaac 300  
 aacaacacta aatttgtcca tgataattat gtgattcgga ggacagctgt tgatagtgga 360  
 atccctctcc tactaattt tcaggtgacc aaactttttg ctgaagctgt gcagaaatct 420  
 cgcaagggtg actccaagag tcttttccac tacaggcagt acagtgctgg aaaagcagca 480  
 tagagatgca gacaccccag cccattatt aaatcaacct gagccacatg t 531



<210> 94  
 <211> 547  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> 547  
 <223> n = A,T,C or G

<400> 94  
 gttaaacaatg gtctgcgtgc cttaagagag acgcttcctg cagaacagga cctgactaca 60  
 aagaatgttt ccattggaat tggttggtaaa gacttggagt ttacaatcta tgatgatgat 120  
 gatgtgtctc cattcctgga aggtcttgaa gaaagaccac agagaaaggc acagcctgct 180  
 caacctgctg atgaacctgc agaaaaggct gatgaaccaa tggaacatta agtgataagc 240  
 cagtctatat atgtattatc aaatatgtaa gaatacaggc accacatact gatgacaata 300  
 atctatactt tgaacccaaa gttgcagagt ggtggaatgc tatgttttag gaatcagtc 360  
 agatgtgagt tttttccaag caacctcact gaaacctata taatggaata catttttctt 420  
 tgaaaggggc tgtataatca ttttctagaa agtatgggta tctatactaa tgttttttata 480  
 tgaagaacat aggtgtcttt gtgggttttaa agacaactgt gaaataaaat tgtttcaccg 540  
 cctggtn 547

<210> 95  
 <211> 1265  
 <212> DNA  
 <213> Homo sapiens

<400> 95  
 gtgggtcaagc agtgattttt ctgggactgc agaagttcct gctgtgcccc accttttatta 60  
 ctaactggga aagacccagg gagactggga tgggctcatg attctacata cagaactcat 120  
 ccaagaaagg aggaaaagct gattttttgtg aacgtcgcta cttgtgcctg aactaactct 180  
 caggcacatt agtcagaaaa tactacctat gggtactccc ccaggttcct aaaagtaaag 240  
 ctttagaggc caccaaattg gcaattgaag ctggcttcctg ccatattgat tctgctcatt 300  
 tatacaataa tgaggagcag gttggactgg ccatccgaag caagattgca gatggcagtg 360  
 tgaagagaga agacatatc tacacttcaa agcttttggtg caattcccat cgaccagagt 420  
 tgggtccgacc agccttggaag aggtcactga aaaatcttca attggattat gttgacctct 480  
 accttattca ttttccagtg tctgtaaagc cagggtgagga agtgatcccc aaagatgaaa 540  
 atggaaaaat actatttgac acagtggatc tctgtgccac gtgggaggcc gtggagaagt 600  
 gtaaagatgc aggattggcc aagtccatcg ggggtgtccaa cttcaaccgc aggcagctgg 660  
 agatgatcct caacaagcca gggctcaagt acaagcctgt ctgcaaccag gtggaatgtc 720  
 atccttactt caaccagaga aaactgctgg atttctgcaa gtcaaaagac attgttcttg 780  
 ttgcctatag tgctctggga tcccaccgag aagaacctat ggtggaccgc aactccccgg 840  
 tgctcttgga ggacccagtc ctttgtgcct tggcaaaaaa gcacaagcga accccagccc 900  
 tgattgccct gcgctaccag ctrcagcgtg gggttgtggt cctggccaag agctacaatg 960  
 agcagcgcct cagacagaac gtgcagggtt ttgagttcca gttgactgca gaggacatga 1020  
 aagccataga tggcctaacc agaaatgtgc gatatttgac ccttgatatt tttgctggcc 1080  
 cccctaatta tccattttct gatgaatatt aacatggagg gcattgcatg aggtctgcca 1140  
 gaaggccctg cgtgtggatg gtgacacaga ggatggctct atgctggtga ctggacacat 1200  
 cgcctctggt taaatctctc ctgcttggtg atttcagcaa gctacagcaa agcccattgg 1260  
 ccaga 1265

<210> 96  
 <211> 568



<212> DNA  
<213> Homo sapiens

<400> 96

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ccagtgtggt ggaattcggg ttaattacaa aatttgatca cgatcatatt gtagtctctc 60
aaagtgtctt agaaattgtc agtgggtttac atgaagtggc catgggtgtc tggagcacc 120
tgaaactgta tcaaagttgt acatatttcc aaacattttt aaaatgaaaa ggcactctcg 180
tgttctcctc actctgtgca ctttgctgtt ggtgtgacaa ggcatttaaa gatgtttctg 240
gcatttttctt tttatttgta aggtgggtgg aactatgggt attggctaga aatcctgagt 300
tttcaactgt atatatctat agtttgtaaa aagaacaaaa caaccgagac aaacccttga 360
tgctccttgc tcggcggtga ggctgtgggg aagatgcctt ttgggagagg ctgtagctca 420
gggcgtgcac tgtgaggctg gacctgttga ctctgcaggg ggcattccatt tagcttcagg 480
ttgtcttggt tctgtatata gtgacatagc attctgctgc catcttagct gtggacaaag 540
gggggtcagc tggcatgaga atattttt 568
```

<210> 97  
<211> 546  
<212> DNA  
<213> Homo sapiens

<400> 97

```
ttgtaccgta tctgtaggca tcctgtaaat aattccaagg ggaaaactaa acgaggacgt 60
gggttgtatc ctgccagggt gagtggggct cacacgctag ggtgagatgt cagaaagcgc 120
ttgtatttta aacaacaaaa aagaattgta aggggtggct gctgccaggc ttgcactgcc 180
gttcctgggg gtgtgcatct tcgggaaagg tgggtggcggg gcgtccacta ggtttcctgt 240
cccctgctgc tccttccgta agaaaatgaa atattctatg cctaatactc acacgcaaca 300
tttcttgtag tttgtaagtc gtttgcgaga atgcagacca cctcactaaa ctgtaaacgg 360
taaagagatt tttacttttg gtctccgtga gtgcgcatct tactaagggt tacacaggaa 420
ttccacctga agacttgtgt taaagttcta cagcgcgcac tgttaactga acgtcttttt 480
cttcagccta tacgcggatc cttgttttga gctctcagaa tcactcagac aacattttgt 540
aactgc 546
```

<210> 98  
<211> 547  
<212> DNA  
<213> Homo sapiens

<400> 98

```
tactgggtgc caagctatgt gccaggcact ttacatgtat tgatttaaca cttaacagcc 60
actctatatt attccctttt tacagatgag gcaattttaag ctcaaagcat ttaagtagac 120
aaccaacctt gaatcacata gcaaatgaca gaagccagag gcctcccaag tctctctaac 180
tccaaaccct atgcttactc tactatatca cactaccttg caataggaca aagggaatat 240
gtggtaaact atgttcccag catctaaaag ccaggagtgg ttttcatttt tctttaagaa 300
gatgatagtg tgatttgaaa catatctgaa tttcagaaga ggggactttt aaaaattgcc 360
actcataagg aaagaaagaa ctttttcaca tatttttgaa agaaacgatg gtgagaagat 420
attcttgata atagagatat gctaacattt gctttgggtg tttttagagt tagatttttt 480
tgggtgtgtac tttataggct tgcataattg ttacttttaa cagctgaagt tctaagtaag 540
agtgttc 547
```

<210> 99  
<211> 122  
<212> DNA  
<213> Homo sapiens



<400> 99

```
cagcctttct gtcatcatct ccacagccca cccatcccct gagcacacta accacctcat 60
gcaggcccca cctgccaata gtaataaagc aatgtcactt ttttaaaaca aaaaaaaaaa 120
aa 122
```

<210> 100

<211> 449

<212> DNA

<213> Homo sapiens

<400> 100

```
ctgacggcctt tgctgtccca gagccgccta aacgcaagaa aagtcgatgg gacagttaga 60
ggggatgtgc taaagcgtga aatcagttgt ccttaatttt tagaaagatt ttggtaacta 120
gggtgtctcag ggctgggttg gggtcctaaag tgtaaggacc ccctgccctt agtggagagc 180
tggagccttg agacattacc ccttcatcag aaggaatttt cggatgtttt cttgggaagc 240
tgttttggtc cttggaagca gtgagagctg ggaagcttct tttggctcta ggtgagttgt 300
catgcgggta agttgaggtt atcttgggat aaagggtctt ctagggcaca aaactcactc 360
taggtttata ttgtatgtag cttataattt ttactaaggt gtcaccttat aagcatctat 420
aaattgagtt ctttttctta gttgtatgg 449
```

<210> 101

<211> 131

<212> DNA

<213> Homo sapiens

<400> 101

```
ccatgttctc tcttgactac gcataatgtga gatttgcccc tccgccccgc tcgtgatagc 60
catccagatc ttttacctgg ccctgtcttg gagaatctgt tttcaatctc cactgattgc 120
ccccttgctg g 131
```

<210> 102

<211> 199

<212> DNA

<213> Homo sapiens

<400> 102

```
ctgctgcgcc tgatgctggg acagccccgc tcccagatgt aaagaacgcg acttccacaa 60
acctggattt tttatgtaca accctgaccg tgaccgtttg ctatatctct ttttctatga 120
aataatgtga atgataataa aacagctttg acttgaaaaa aaaaaaaaaa aaaaaaaaaa 180
aaaaaaaaaa aaaaaaaaaa 199
```

<210> 103

<211> 321

<212> DNA

<213> Homo sapiens

<400> 103

```
tttttttaggt ttttaaactt tttatttgca tattaataaaa attgtgcatt ccaataatta 60
aaatcatttg aacaaaaaaaa aatggcactc tgattaaact gcattacagc ctgcaggaca 120
ccttgggcca gcttgggtttt actctagatt tcaactgtctg cccaccccca cttctttcac 180
cccacttttt ccttcaccaa catgcaaagt ctttccttcc ctgccacca gataatatag 240
acagatggga aaggcaggcg cggccttcgt tgtcagtagt tctttgatgt gaaaggggca 300
gcacagtcac ttaaaacttga t 321
```



<210> 104  
 <211> 309  
 <212> DNA  
 <213> Homo sapiens

<400> 104  
 tttttttttt tttttatttt tttttttgca tcaaaaaact ttattttccat ttggcccaag 60  
 gcttggttagg atagttaaaa aagctgccta ttggctggag ggagaggctt aggcaaaacc 120  
 cctattactt tgcaaggggc ccttcaaaag tctctgggct tctatttcaa ccgcgatgat 180  
 gtggctctgg aaggcgtgag ccactttttc cgggaactgg ccaaggaaaa gcccgagggc 240  
 tacaaccgtt tcctgaaaat gcaaaaccag cggggcggcc gcgctctttt ccaggacatc 300  
 aaaaagcca 309

<210> 105  
 <211> 591  
 <212> DNA  
 <213> Homo sapiens

<400> 105  
 cttatttctg catgggtcgg agagtgggag ggactgcttt actgagttat agtgaatgta 60  
 gttttaacct aagcgcctca catgactaac tcctcatcca tcaagaatga gctcagctct 120  
 cacttcccca ctctcacc cctgtaaaag taacctttct ccaaggttat gcttcaacag 180  
 gaatagctaa catttattaa attgtggcac gtaagtatct tggatatatt ggctcattga 240  
 atctcacac ctactatttt acagagatgc cagtggggct tgagattgaa tcacttgccc 300  
 aggtccccc tgctggtaaa cagtagaggg ggctcctgac ccatcagtct ggcttgacaa 360  
 cccattccct caactgcgga tcccggatcc ccttatcacc ctgttgattt ctccataggg 420  
 tgtggtaaca tttgttgcac gaatggaccg ttgaaatagg gcctggcagg gagaaattca 480  
 ggaaatgaat gaatggttct tccctggcag cctttgatga cttacaagcc ccttcaaggg 540  
 ggaaagccat ttttctccct gggactcctt gaaagcccgg gagccctgcc t 591

<210> 106  
 <211> 450  
 <212> DNA  
 <213> Homo sapiens

<400> 106  
 ctgccactcc tgcctctgct accccgaaac cggagaggga gctcaataat aacacaggtc 60  
 ccactaaact aattaagggt ttggcataac ctgtcattga attcaagtgt ccaacaactg 120  
 tttgcttaaa atatcattag acctaatatt tttttcaaag gcacaaagt taaacatggg 180  
 gggggcgggt gttgagaggg gtctgggata cccttaaacc caaaaaagtg atttgttccc 240  
 ccttgcccag aagggtgact gttccactgg gcctgtcacc acaggacatt ttccatgaca 300  
 agcactcacc ttcttgggga aggggcatca gggtggcaca ggaaaggccc aagtgagggg 360  
 ccactctgta cattaatact ttgggtgatta atgtttgggg agaggcagga ttctcaccca 420  
 cctttttgac ttcaaacact ctactcaag 450

<210> 107  
 <211> 116  
 <212> DNA  
 <213> Homo sapiens

<400> 107  
 tcgacgaaag ttactgtcac tcagttgtaa atccatcagc ttttcacctg ttaaaaattt 60  
 tgcaaaatat acatgttctc ctctgtttt caattcttcc atcttttttc ttgagg 116



<210> 108  
 <211> 291  
 <212> DNA  
 <213> Homo sapiens

<400> 108  
 ctgctcgaag ttgtcaaaac ccacgtgcag ggcaatggag agtccgatgg ccgaccacag 60  
 cgagtagcgt cctcccaccc aatcccagaa ctggaacatg ttttgagggg caattccaaa 120  
 ctctttcact ttggttgtgt tagtagacag ggcaacaaaag tgcttcgcca ctgcagtagg 180  
 atccttggcc gcctggagaa accactcctt cgccgtctct gcattcgtga tggctctcctg 240  
 ggtagtaaaag gtcttggagg caatgatgaa cagggaggac tcgggggttca g 291

<210> 109  
 <211> 662  
 <212> DNA  
 <213> Homo sapiens

<400> 109  
 gctgtttcca cagtacgcct gcctcacacc ttgcgatgcg ccaacatcac catcattgag 60  
 caccagaagt gtgagaacgc ctaccccggc aacatcacag acaccatggg gtgtgccagc 120  
 gtgcaggaag ggggcaagga ctcttgccag ggtgactcgg gggggcctct ggtctgtaac 180  
 cagtctcttc aaggcattat ctcttggggc caggatccgt gtgcgatcac ccgaaagcct 240  
 ggtgtctaca cgaaagtctg caaatatgtg gactggatcc aggagacgat gaagaacaat 300  
 tagactggac ccaccacca cagcccatca ccctccattt ccacttggtg tttggttcct 360  
 gttcactctg ttaataagaa accctaagcc aagaccctct acgaacattc tttgggcctc 420  
 ctggactaca ggagatgctg tcaacttaata atcaacctgg ggttcgaaat cagtgaagacc 480  
 tggattcaaa ttctgccttg aaatattgtg actctgggaa tgacaacacc tggtttgttc 540  
 tctgttgtat ccccagcccc aaaagacagc tcttggaact tgccccgggg cggccccgctc 600  
 ggaaaggggg cgaaatttct tcaagaatat ttccatttcc acaaacttgg ggccggggggc 660  
 cc 662

<210> 110  
 <211> 323  
 <212> DNA  
 <213> Homo sapiens

<400> 110  
 tcctgtgaaa cagcccattt tcttacctac tgtggggttg tgctcaggag gaacgatata 60  
 cgccaataca agcaggaaat ctgcagctcc tctgctatgt gcctcagaac actttcaatt 120  
 tttctgggtca atgctctgat taggtatcat acataaaagc cagcatatta gtttaaactct 180  
 ctaacaaaaa actatatattt ccaaagtcac tatcatttgg gccaatatag tgatcttttc 240  
 gtgctttgtt gagcttcac tttagggcat ctcttctttc ttccatttca tgaagtctcg 300  
 catttccatg tgcaaattta cag 323

<210> 111  
 <211> 336  
 <212> DNA  
 <213> Homo sapiens

<400> 111  
 tccagtgcgc tccagcctta tctaggaaag gaggagtggg tgtagccgtg cagcaagatt 60  
 ggggcctccc ccatcccagc ttctccacca tcccagcaag tcaggatatc agacagtcct 120  
 cccctgaccc tcccccttgt agatatcaat tcttaaagc agccaaatac tctatatcta 180  
 tagtcacagc cctgtacagc atttttcata agttatatag taaatgggtc gcatgatttg 240



tgcttctagt gctctcattt ggaaatgagg caggcttctt ctatgaaatg taaagaaaga 300  
aaccactttg tatatatttgt aataccacct ctgtgg 336

<210> 112  
<211> 218  
<212> DNA  
<213> Homo sapiens

<400> 112  
tttttttttt tttttttttt tccagtcagg agtatatttta atcactgtct acagagacac 60  
ctacatacac acacgggtgg ggaatgaacc caaagttttt aggtgaagtc tctcagggcc 120  
caccctgtgc cacagacctt cctcgggttg agagattctg ggcaaagcat ccgtgctctc 180  
atgagattat cctggggaga tttagaagaa ttttgtgg 218

<210> 113  
<211> 533  
<212> DNA  
<213> Homo sapiens

<400> 113  
ctgcaccgac agttgcatg aaagttctaa tctcttccct cctcctgttg ctgccactaa 60  
tgctgatgtc catggtctct agcagcctga atccaggggt cgccagaggc cacagggacc 120  
gaggccaggc ttctaggaga tggctccaga aaggcggcca agaattgtgag tgcaaagatt 180  
ggttcctgag agccccgaga agaaaattca tgacagtgtc tgggctgcca aagaagcagt 240  
gcccctgtga tcatttcaag ggcaatgtga agaaaacaag acaccaaaagg caccacagaa 300  
agccaaacaa gcatcccaga gcttgccagc aatttctcaa acaatgtcag ctaagaagct 360  
ttgctctgcc tttgtaggag ctctgagcgc ccactcttcc aattaaacat tctcagccaa 420  
gaagacagtg agcacaccta ccagacactc ttcttctccc acctcactct cccactgtac 480  
ccacccttaa atcattccag tgctctcaaa aagcatgttt ttcaagatct aaa 533

<210> 114  
<211> 261  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> 43  
<223> n = A,T,C or G

<400> 114  
ccatatctgc tcggcgctac ttctttcttg gattgatcct gantgatgca ttggcgatgc 60  
ctttggagaa ggacatgtga tgtgatggtc ttcacgttcc acatgtactc gggcaaatag 120  
ggggacaaac tgaagttaaa caggtcgaaa ctagaggagc tgctgaccct ggagctgacc 180  
actttcttgg ggaaaaggac acatgaaggt gctttgcaaa agctgatgag caatctggac 240  
accaacatag gacaacaacg t 261

<210> 115  
<211> 267  
<212> DNA  
<213> Homo sapiens

<400> 115  
cctctcctgt gggttccaga ccctgttcca gcaacaattg ctgggacacc tgggcccact 60



```

gctccacctc gccagggcct ggccctctcc atctcagccc tgacagccac ccagtgataa 120
acacagcagg cttcctaagc aatgtgacgc accagagggg tgggtggtaca cgttcccctt 180
gaagtcattc gaaaattaga gaacagattt gcctcatagc tgaagagaga ccctattcca 240
agcatgaatg gccttgacaa tgttcct 267

```

```

<210> 116
<211> 239
<212> DNA
<213> Homo sapiens

```

```

<400> 116
ctgatgacct ggggtctagt gaaaatgcag ggtcagattc agtgggtctg gggctctgaat 60
ctctaaggcg ctgccaaagt atgctgatgc tcctggcttg tggaccaccc tgtgtatagc 120
aaagctctag actaggaggt ctcaaccttg gctgcacaga attatctggg gagtttttaa 180
atttcccagt gccagggctg cattcatatc atagtagaga cagggttttg ccatgctgg 239

```

```

<210> 117
<211> 168
<212> DNA
<213> Homo sapiens

```

```

<400> 117
aaaaaacttt tatattgctg catcttccac agttcttttg gtagtctctg aacttaaaat 60
ttgtaggagt ttagactac ctaaattttt aagttatgga tttgttcata gggtgtaggg 120
gtaggttaaag aaggaaacag acaagaaaat ggcttcttga ggtggcag 168

```

```

<210> 118
<211> 150
<212> DNA
<213> Homo sapiens

```

```

<400> 118
aaaaaaaaaga gtttatattag aaagtatcat agtgtaaaca aacaaattgt accactttga 60
ttttcttgga atacaagact cgtgatgcaa agctgaagtg tgtgtacaag actcttgaca 120
gttgtgcttc tctaggaggt tgggtttttt 150

```

```

<210> 119
<211> 154
<212> DNA
<213> Homo sapiens

```

```

<400> 119
aaactgtgtg agatattaac cagccgccct gttataaaat caggaaatcc aaacagcgat 60
ttacaccgat taacaccccc ttttatattt tttcaaatac actgagaaaa taatcaaacg 120
ttttcatctc tcttgtcttt ttttgttttt tcct 154

```

```

<210> 120
<211> 314
<212> DNA
<213> Homo sapiens

```

```

<400> 120
ctgcgtggag tgacgggagg agggaatcac tgtgtgtgag agagtgttc agactcaatt 60
tccaaaataa ttttcacccc tctaagcatg taaattcaaa gatggatcct tcatagaaat 120

```



```

taaaaaaatca atttgagctc atttcgaata cagaacaagt atggcacaga tggaagtcct 180
gccacgtttc ctttaatgat gctgactctt gtatcacaca ggccagcatg aagtttctta 240
ctcagacttt acaggcattt tccgtaattc aatcagtcct gctcccagca caacacagga 300
ggtgattcga gaat 314

```

```

<210> 121
<211> 601
<212> DNA
<213> Homo sapiens

```

```

<400> 121
aaaaaaaaacc taattcattg aagtaataac caaataattt tcaatcttga ttcaactgtg 60
attcaaatct tacaccattt gccccttcta tgaatttatg tataaaattt tttaagagtc 120
agagttttttt tttcttgatt aattggatgt atttcacaga atttccaact gctcacgtta 180
gttttcttcc ttttagagtt gatctctcta atgtattaga tcttcatgcc tttgatagtc 240
tctctggaat aagtttgcag aaaaaacttc agcatgtgcc aggaacacaa cctcaccttg 300
atcagagtat tgtacaatca catttgacgt accaggaaat gcaaaggaag aacatcttaa 360
tatgtttatt cagaatcttc tgtgggaaaa gaatgtgaga aacaaggaca atcactgcat 420
ggaggtcata aggctgaagg gattggtgtc aatcaacgac aaatcacaac aagtgattgt 480
ccaggggtgc catgagctct gtgatctgga ggagactcca gtgagctgga aggatgacac 540
tgagagaaca aatcgattgg tcctcattgg cagaaattta gataaggata tccttaaaca 600
g 601

```

```

<210> 122
<211> 486
<212> DNA
<213> Homo sapiens

```

```

<400> 122
ctgttttctaa ttgcttttgt gactgttacc ttttagttca tgccccccca aagagctaaa 60
tttcacattt ttacctacaa aattgatttt taattcctgc aaataattta ccattatgag 120
ctacaagggtg ggcaacagcg cctgaggatc taattttatg catattactc ccaagtattt 180
taacacttgt tggagaagca atatctggat caataaaaca ctgtcccatc aaccatttga 240
gtggggagag ggagaagctc ttctgtaagt aagattcttg caagctcttt gaaatgagtc 300
ttctttccca cagattttct ctactctttc aatacaaaca gataggagaa gagggaatag 360
aaacctggag gaacttgaat atttttgttc tagatagaga tacagttatt gaaaaggaaa 420
cctagaaagt agtcacacgt cgcttattta ggccagaagt aattgtactg ggcaaaaatt 480
tcactt 486

```

```

<210> 123
<211> 239
<212> DNA
<213> Homo sapiens

```

```

<400> 123
ctggtgggtc ttttttttct ctcagagctc aagcctgtag tgcctgatgt catttctttc 60
aagttgcca cagtatctcc acttaaacta ggctagtaac caaaataatg tggaccttct 120
ttaggaaaca gtgtgggaga ataggagtcc agccgtaaga taaactggaa atatttgggc 180
gtcttgtacc tggctacgca ccacctcagt gttgttctta cataaacaag gcccctttt 239

```

```

<210> 124
<211> 610
<212> DNA
<213> Homo sapiens

```



<220>  
 <221> misc\_feature  
 <222> 4, 12, 30, 73, 75  
 <223> n = A,T,C or G

<400> 124  
 ccaccaagt cnttgatgat cactgaccen cgcgcgcctg ctggaccaag gtggctgcgg 60  
 ggaaatcgcc acngngcttt cggttttctt ggtgaaggaa tacaccgcgc cgacagcagg 120  
 ttttcagtca gggtcaggga ctggttgcttg cgcgcgaaaa tcaccggtac gccgagggtc 180  
 aggccggtca tgatecgccg tgcaatgccc gaggcttcga tgggtgacgat cttggtgatg 240  
 cccgaatcct tgaacaacgc agcgaattca tcaccgatca gtttcatcag cgcggggtcg 300  
 atctgggtgg tcaaaaaggc gtcgaccttg agtacctgat cggaaagcac gatgccttct 360  
 tcgcgaattt tcttggtgcag tgcttccacg aaagcttcct ctggttgccg aacacgcgcc 420  
 gaaagtagat taaaaagtag tcgattctag cgctttaaca tcgcgcgtat atccgccagg 480  
 gcggtattgc cgcgaacggc tttgacttcg gttggtgtgt cgtcgttgcc ttcccatgcc 540  
 aggtcatccg gcggcagttc gtcaagggaac cggctggggg cacaatcaat gatctcgccg 600  
 tactgcttgc 610

<210> 125  
 <211> 196  
 <212> DNA  
 <213> Homo sapiens

<400> 125  
 ctatagggct cgagcgggcc cccgggcagg taaaaaatca gccctaatt tctccatggt 60  
 tacacttcaa tctgcaggct tcttaaagtg acagtatcct taacctgcca ccagtgtcca 120  
 cctccggcc cccgtcttgt aaaaagggga ggagaattag ccaaactg taagctttta 180  
 agaagaacaa agtttt 196

<210> 126  
 <211> 247  
 <212> DNA  
 <213> Homo sapiens

<400> 126  
 aaattagtta aaaaaatgca ttctcattt gatatagcca cattccaaat gcttaaaagc 60  
 cgcattgtatc tagtgactac catactggag agtacaaata tagaacttta cccgtcactg 120  
 cagacagttc tgttggtattg tgcagcattg gacaatatat acagtttgcc tgtatatgag 180  
 aaagagagag agagagagag tgtgtgtgtg tgtgtgtgtg tgaagtgcaa taaggctgac 240  
 aggcac 247

<210> 127  
 <211> 590  
 <212> DNA  
 <213> Homo sapiens

<400> 127  
 cctccacggc atggcgcaat tgttggttcag gggccggccag gttgctgccc atgccgatgt 60  
 agatacgttc cacgtgctta ctgcgcagac gcactcgaag cgtcgccagc gctacgtttg 120  
 cgcttgctgc cactgctgcg gcgacgcttt ttccgggcat cgcgggtggc ttgcgctttg 180  
 ctgctgagct ctttgatcat ctgcgcggcg tggctgtcgt tggcgctcctg gtagtcggtc 240  
 caccactcgc caaggccgct ggtctgttcg ccggcgcttt cagcagcag caggaagtca 300  
 tagcccgga cggaagcgcg ggttgctccag caacaggctc gcacgtttgc cgctgcggcg 360



```

tggcaggcgc tcctgcatgt cccagatttc acggatcggc atggtgaagc gtttcgggat 420
ggcgatgcgc tggcattgct cggcgatcag ctctgtgagca gcttcctgca tggctggaat 480
tgccggcatg ccacgggtctt gcaggcgcgc gacgcgtttc gaaagcgcgc gccacaacag 540
ggcggcaaag aggaacgcgc gggtgaccgc tttgttctgc ttgatgcgc 590

```

```

<210> 128
<211> 361
<212> DNA
<213> Homo sapiens

```

```

<400> 128
ctgcccattg aaaccctcca ggagctgctg gacctgcaca ggaccagtga gagggaggcc 60
attgaagtct tcatgaaaaa ctctttcaag gatgtaacca aagtttccag aaagaattgg 120
agactctact agatgcaaaa cagaatgaca tttgtaaacg gaacctggaa gcatcctcgg 180
attattgctc ggctttactt aaggatattt ttggtccctt agaagaagca gtgaagcagg 240
gaattttatt taagccagga ggccataatc tcttcattca gaaaacagaa gaactgaagg 300
caaagtacta tcggggagcct cggaaaggaa tacaggctga agaagttctg cagaaatatt 360
t 361

```

```

<210> 129
<211> 546
<212> DNA
<213> Homo sapiens

```

```

<400> 129
aaaaatacaa attcagtaag acttttgctc taacaacaat ttttcaaaac gaatcaacaa 60
caaaaaagta tccagtgttt cttttcttat gaagatataa taaaacacag tattggtaag 120
cacattttta cagtatgctt ttcttttgta gggaaaggag atatggctat gtctaaccatc 180
gtgggatcca atgtgtttga tatgttgctc cttggtattc catggtttat taaaactgca 240
tttataaatg gatcagctcc tgcagaagta aacagcagag gactaactta cataaccatc 300
tctctcaaca tttcaattat ttttcttttt ttagcagttc acttcaatgg ctggaaacta 360
gacagaaagt tgggaatagt ctgcctatta tcatacttgg ggcttgctac attatcagtt 420
ctatatgaac ttggaattat tggaaataat aaaataaggg gctgtggagg ttgatattat 480
taatagtgtt atgcagaaaa tatgaatggc agggaggggc agagagaaaa atccatttct 540
tcattt 546

```

```

<210> 130
<211> 733
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> 611, 631, 668, 689
<223> n = A,T,C or G

```

```

<400> 130
ggggcctctt cctaaaggca ctaateccat ccaatagggc ttaacctcat gacttaatca 60
actttcaaag acaccacatc ctaatgccat cacatcagaa tttaggcttc aacatatgaa 120
ttttgggggg acacaaacat tcacctcata gcattcattg tttcttggtt ttggcaaagc 180
caagactcac attgtctaag ttatttgact tttgagtcgc cagatgtgaa aacagtgcga 240
aacagtccag cttcatgagt ggagaacagc atttgtgaca accaccaaag tacctctgtg 300
gtcagtgtcc tcaaccaggg cacagcatca tggaccagag cctctgcagg gcacagagga 360
gtggtgagga acaggggctc tggagcaacc ccacttcctt ctgctttgta tatggggggg 420

```



```

tctgcacatg actgcatttg aaaagggctt cactgcgctt gctgaaggag tgcacttgag 480
ctagcggaga gttcccagag ggtgtctgga agaagcaaag gctattcttt gtttcactca 540
gttatagatg gaagtcagac acttctgcct gaagtacttt cacacactcc acagtcttaa 600
gaaggatgga naaagcatgc caactactca naaaaccaca ggtgttcaag caatggatc 660
cttttatncc tacaactagt ggacaaagng gggcctctgt aatttgggaa agctaggaaa 720
actttttctg ggg                                     733

```

```

<210> 131
<211> 305
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> 16, 19
<223> n = A,T,C or G

```

```

<400> 131
aaacacatac gaatanttna actgtgatta tgaagtgaca gccggctaaa tatgtcttgt 60
attttctctc ttcctttttt tgctaactca tcctttattc cattcctgct tccatggtaa 120
tgcaggctca aataaattac taggatacaa gattacttca agcctctttt ctgtggaact 180
cataatatga taagcatttg ttacaagatt gcctgtagtt gtttagggga caaattatat 240
tagggaaaga aagtctttct ttagttgggt aaattttcta ttataattgg gtactaaatt 300
tattt                                             305

```

```

<210> 132
<211> 545
<212> DNA
<213> Homo sapiens

```

```

<400> 132
aaacaatgct acactcattt ttggcaaagt gctgtattgt tcagtctgtg tacaaaactg 60
accatctatg aaccaatcag tataaaaaat ttctataaaa acaaaattta gacagcggct 120
caagaaaaca agctgccatt tatgcataga ttgatgtaca gtaacctaac caaatgtccc 180
ttttgaattt tcaagttact gaaaaaaaaat gtgtcgagaa acacattaag aaggcacatg 240
tacagtctac aatactcttc agtctcccta actcatgccc tgcccctata aaggaaatat 300
gttcacaatt ttacttgaga aaaaaaaaca aagccactta aaaaaaaaaa aacacacacg 360
caattattaa agttcaaaat ctctggagga aaatacaagc aaaaccactc atacactcca 420
agcctgaaac acacatctaa cctccccagg tactggtttg gttttcagag gtccacctag 480
aaaacaaatc taaaacttca ggcaaaacag agcaaaaactg gacatttaac aattacacaa 540
ttttt                                             545

```

```

<210> 133
<211> 330
<212> DNA
<213> Homo sapiens

```

```

<220>
<221> misc_feature
<222> 36, 68
<223> n = A,T,C or G

```

```

<400> 133
aatatttatt actaatatct tataatgttt tgtggnacca tggcatacct tgggtactat 60

```